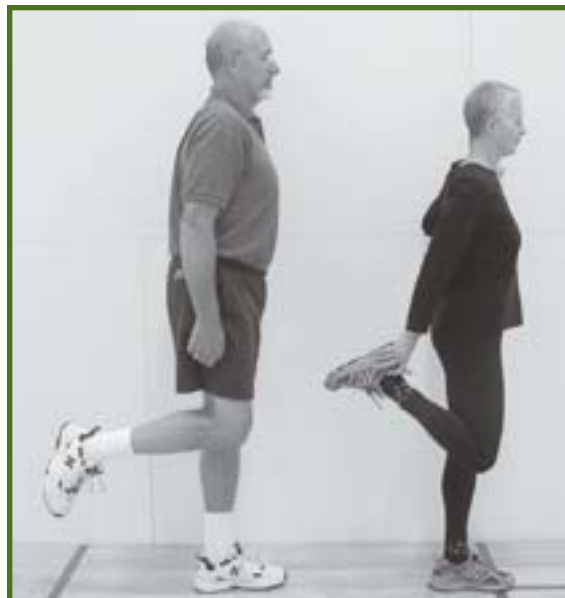


Fit and Fall Proof



Class Leader Curriculum

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Introduction

“No one is too old to enjoy the benefits of regular physical activity. Of special interest to older adults is evidence that muscle strengthening exercises can reduce the risk of falling and fracturing bones and can improve the ability to live independently.”

Physical Activity and Health: A Report of the Surgeon General, 1996

Welcome to the Fit and Fall Proof Program! The Idaho Department of Health and Welfare Injury Prevention Program, in conjunction with district health departments, is pleased to initiate this group physical activity program designed for older adults who want to improve their health and reduce their risk of falling. It has been documented that people who have difficulty doing daily activities, as well as people who are physically fit, can benefit from regular physical activity.

We salute you as a peer educator or younger adult for being a vital part of this program. The *Fit and Fall Proof* manual is designed to assist a successful community exercise program. It is our hope that you will find our suggestions helpful, because you play a key role in improving the quality of life for your students.

Functional fitness is the primary theme for the Fit and Fall Proof program. This will help the older adult maintain an independent, freely functioning lifestyle. Muscle strength and flexibility play a primary role in balance and maintaining physical activity. Regular muscular strength transfers into maintaining vitality - lifting a grandchild for a hug, getting out of a chair with ease, or climbing stairs without puffing.

Adequate flexibility allows the older adult to bend over and tie their shoes or reach an item on a top shelf without hesitation. In addition, the Fit and Fall Proof program is designed to focus on various components associated with balance, including balance exercises, posture awareness, and balance assessments, all of which can reduce the risk of falls and help to maintain static and dynamic balance, taking the fear out of falling and building confidence.

This manual includes a background explaining why this type of training is so important, guidelines for starting your program and leading the class, exercises, class sequences, and handout materials.

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Chapter 1

The Importance of Physical Activity for Fall Prevention

Why Fit and Fall Proof education?

Falls are a major health issue for older adults.

- It is estimated that more than one-third of individuals over the age of 65 fall at least once each year. Rates increase with age.
- Falls are a major cause of hip fractures. Half of those with hip fractures never regain their previous level of function.
- Falls are the leading cause of injury death for individuals aged 65 and older.

What is happening in Idaho?

- Idaho's fall death rate is almost twice the national rate.
- In Idaho, more than three-quarters of individuals who die from falls are 65 years of age or older.

Most falls are preventable!

- Physical activity combined with simple home modifications can reduce the risk for falling.

Why do older adults fall?

Inactivity.

Hazards found in homes and communities.

- Poor lighting, loose rugs, no bathroom safety equipment, slippery surfaces, and tripping hazards.

****See Chapter 8 for “A Home Fall Prevention Checklist” that can be copied for student use.****

Physical challenges the older adult may face because of aging or chronic diseases.

1. Medical Conditions

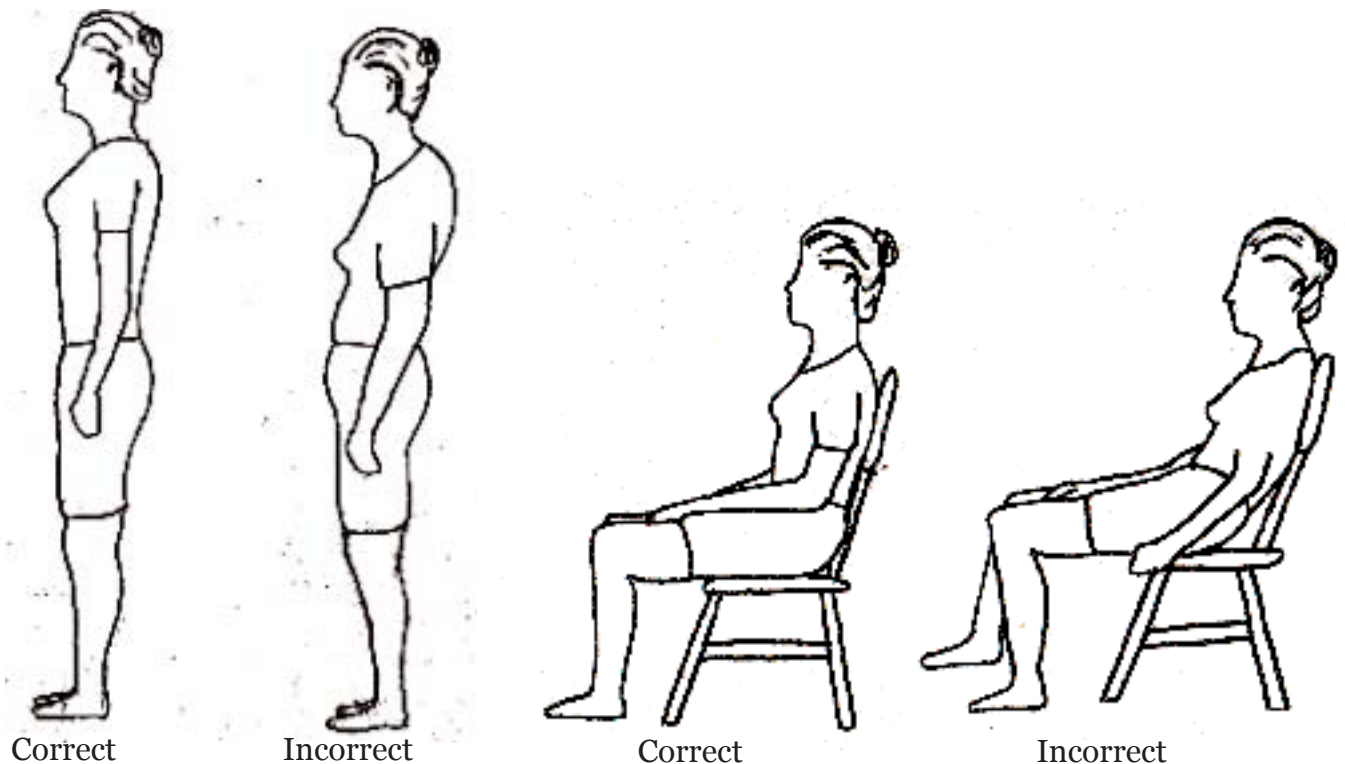
- Many conditions can affect the sensory systems and musculoskeletal structures. They include arthritis, diabetes, disorders of the inner ear, osteoporosis, Parkinson's disease, strokes, and vision disorders.
- Medications for treating these illnesses can disrupt balance.
- Inner ear disorders can cause dizziness.
- Arthritis and osteoporosis cause pain and damage joints and bones, reducing mobility.

- Macular degeneration, cataracts and other eye disorders reduce vision and limit activity levels.

2. Posture

Correct posture, which aligns the body and controls excessive swaying, is a key to balance.

- Aging and chronic illnesses can cause muscle and joint problems that reduce the postural stability of the older adult, causing them to lose their balance and putting them at risk for falling.
- Poor posture contributes to falls.



3. Balance

Balance is an automatic and unconscious process that controls how a person manages their center of mass while standing or moving. Our sense of balance depends on three sources:

- The eyes, which tell us where the body is relative to our surroundings
- Sensory nerves, which provide feedback about the movement and position of different body parts
- The vestibular system of the inner ear, which detects head movements and motion

If disruptions occur to our senses due to medications, illnesses, poor vision or weak muscles, dizziness occurs and falls can result.

Summary of fall risk factors

The following is a list of risk factors you might see in older adults:

Dizziness and fainting	Balance disorders	Acute illness	Medications**
Nerve damage	Foot disorders	Arthritis	Fear of falling
Poor circulation	Gait impairments	Chronic pain	Past falls
Reduced hearing	Poor arm strength	Dementia	
Slowed reaction time	Poor leg strength	Diabetes	
Hypotension*	Weak ankles	Osteoporosis	
		Parkinson's disease	
		Stroke	

* Sudden drop of blood pressure when standing

** Use of four or more prescriptions

The Fit and Fall Proof program can help reduce the risk of falling.

Regular physical activity can aid the older adult in many ways:

- **For older adults, physical activity programs that challenge the visual and vestibular systems help them learn to compensate or retrain these senses.**
- **Balance and postural training reduces postural sway, improves the sensory systems, and reduces the risk of falling.**
- **Older adults who improve their strength and flexibility gain the following benefits:**

Improved posture	Increased gait speed	Improved stability
Quicker reaction time	Greater mobility	Reduced risk of falls

Exercise improves the older adult's confidence in their physical abilities.

- Older adults who have more confidence in their physical ability are less afraid of falling and are more physically active.
- A greater level of confidence reduces the risk of falling.

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Chapter 2

Setting Up a Community Fit and Fall Proof Program

Your health district has arranged for a site for your Fit and Fall Proof class. Even so, it is important for you to inspect the facility and meet the appropriate facility coordinator before starting class. Questions concerning the facility, access, class-related equipment and recruitment of participants should be directed to the health district injury prevention program staff.

Class Logistics

- Classes are to target community-dwelling seniors aged 65 years and older.
- Classes are intended to be free to low-cost.
- Class are to be held a minimum of twice per week.
- Classes should be 30-60 minutes in length.
- Classes should be held, at minimum, in six-week consecutive blocks.
- Class should be held on days and at times most convenient for potential participants.
- Class size should be small enough so the leader can observe participants for proper technique. (Example: 10-20 participants.)

Site Selection

Site selection is a health district responsibility. Sites should be places seniors naturally gather, such as:

- Senior centers
- Churches
- Community centers
- Recreation centers
- Senior housing complexes (but not assisted living facilities unless seniors living in the community are targeted to attend)

The following equipment should be available at the site:

- Chairs (non-skid, sturdy)
- First aid kit
- CD player
- Locked file cabinet

Site Kit provided by the health district and containing:

- Class leader notebook
- Music CD(s)
- CD player (if one is not available at the class site)
- Locking file box (if a locked file is not available at the class site)
- Video of sample exercises
- Therabands (red and yellow)
- Participant activity log books

- 3-Meter Timed Up And Go Test materials including:
 - i. Instructions
 - ii. 3-meter measure (string 3 meters in length)
 - iii. Cone (for turn around point)
 - iv. Stopwatch
 - v. Individual record sheets (pages 3 and 13 of Fit and Fall Proof participant activity log book)

Recruitment Strategies - Class Participants

Targeted class participants:

- Individuals aged 65 years and older who are living in private homes and able to come to the class site.
- We are not targeting individuals living in assisted/long-term care facilities.

Health districts are responsible for recruiting class participants.

- Classes will be advertised using newsletter and newspaper articles, TV and radio interviews, presentations at sites where seniors gather, and distribution of flyers.
- Classes will be advertised by at least two of the above routes for each six-week class series.

Simple and effective mechanisms that class leaders might use to supplement health district efforts are:

- Provide short on-site demonstrations at other site activities.
- Ask class members to let their friends know about the class.

*****Copies of flyers that could be used can be found in Chapter 8.****

Fit Note: Word of mouth often is the best advertisement.

Fit and Fall Proof Checklist - Know Your Facilities

Many details need to be addressed before class begins. On the following pages you will find a checklist. Please note it is not all inclusive and you may need to add some items of your own. You also may find some of the information is not relevant to your circumstances.

This “Know Your Facilities” checklist should be completed when you meet with the facility coordinator and inspect the exercise area. **Fill out the checklist and maintain a copy for your records.**

Why is the checklist so important? It will help you ensure the safety of your participants. Knowing emergency procedures and inspecting the facility will assist with identification of potential problems. Working with the equipment also will provide added confidence for you when you begin teaching. In addition, it will help you understand your exercise area and allow you to develop class management strategies.

Know Your Facilities Checklist

I. Names and Contact Information of Key Personnel (facility and program directors, custodians etc.):

II. Review Specific Facility Rules and Emergency Procedures:

Where is the first aid kit?

III. External Access to Exercise Room

Handicapped accessible _____
Hand rails _____
Clear walkways (shoveled in the winter) _____

IV. Exercise Room - Do you have access to the following?

Exercise room - Are keys needed? _____
Temperature controls _____
Lighting controls _____
Restrooms for the participants _____
Access to water _____
Phone for emergencies _____
Cleaning equipment (broom, dustpans, etc.) _____

V. Exercise Area

Space - Is there room to move? _____
What movement patterns could you use? _____
Are the floors non-skid? _____

No obstructions _____
No loose cords _____
No unattached carpets _____

Fit Note: You may need to tape down carpets or cords that cannot be removed.

VI. Equipment - Is the site kit available? Where is it stored? Do you have enough of the following?

Par Q Forms _____
Assessment tools _____
Stopwatch _____
Pencils _____
Chairs (Are they sturdy and non-skid?) _____

Music system (Make sure you try it out and work with it before class.)
CDs/tapes
Resistance bands

Additional items: _____

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Chapter 3

Participants and Assessment Procedures

The following chapter will help prepare you and your students for class. The level of student abilities will give you some insight into what you might expect from participants. Common postural changes are detailed, as well as cues for promoting correct posture. Clothing and shoe recommendations are listed. Also included are screening procedures, assessments, and waivers.

Levels of Student Abilities

The most important person in the Fit and Fall Proof program is YOU! You must be energetic, enthusiastic and sensitive to the needs and levels of ability represented in the group. You will need to model activities appropriately, communicate effectively (older adults may have difficulty hearing), detect signs of physical problems, and react calmly to any situation that might occur.

To assist you in this endeavor it is important to understand the possible functional levels of the students. All levels may be present. Some students will lead active lifestyles, while others will have lost physical function primarily due to lack of physical activity. (See the following list.)

Effects of Aging on Balance

Decreased ability to:

- Balance with smaller base of support
- Adjust to unpredictable situations
- Respond to moving surfaces
- Cope with changing environments
- Adapt when sensory information is incomplete

Decreased speed of response and even delayed response

Decreased intensity of response

Increased postural sway

All of your participants can respond positively to balance training. To challenge them, you must continually encourage them to work at their own pace. Note the following general guidelines for fit (level 1) to frail (level 3).

Level 1: Physically Fit

Healthy active seniors who travel, play a sport, work part-time, garden, or pursue a host of other interests are represented in this group. They may participate in regular activity, functional fitness or organized classes, three to five days per week.

They can stand on one leg, eyes open, for up to 30 seconds and 2-20 seconds with eyes closed. Regular physical activity is important for maintaining this level of fitness.

For Level 1 Exercisers

- Do all movements while standing.
- Use large muscle groups in the lower and upper body.
- Gradually increase intensity of movement.
- Include arm movements, keeping arms at heart level and above for brief periods.
- Provide activities that strengthen all body systems that relate to balance - foot, ankle, lower leg, quadriceps, abdominals, back, and arm strength.
- Maintain BORG Scale of Perceived Exertion at “hard.”

Level 2: Physically Independent

This group includes older adults who have become sedentary or moderately active due to modifications in movement exercise patterns associated with chronic conditions (e.g. arthritis, osteoporosis, hearing and vision changes, or use of multiple medication for such conditions).

A loss of strength and personal concern about a fall or a threat of a fall may be evident. Regular physical activity will improve their function and reduce risk of falling.

For Level 2 Exercisers

- Use a sturdy chair or wall for balance when necessary, but most activities take place standing, hands free from support.
- Include ankle strengthening and range of motion activities as well as a variety of balance training activities.
- Practice good posture and confidence-building activities along with assessments which can show improvement.
- Use large muscle groups of both the upper and lower body.
- Include arm and hand movements with arms at heart level and occasionally above the heart level.
- Gradually increase the pace of movement.
- Maintain BORG Scale of Perceived Exertion at “somewhat hard.”

Level 3: Physically Frail

This group consists of older adults who have lost some independence or have medical conditions that impair balance and mobility (e.g. diabetes, Parkinson’s disease, stroke, or dementia). These participants often use assistive devices. Ankle range of motion and strength may have deteriorated significantly. Weakness in core muscles - back, hip, abdominals - may occur.

Careful attention from the instructor is extremely important. Follow the exercise recommendations closely for participants at this level.

For Level 3 Exercisers

- Use a sturdy chair for balance or have them exercise while sitting in a chair.
- Include individually paced activities.
- Complete fewer repetitions for basic strength and range of motion.
- Increase duration gradually, working up to 20 minutes.
- Encourage frequent breaks.
- Use slow and controlled movements.
- Maintain a slow pace, and keep their rate on the BORG Scale of Perceived Exertion within the “fairly light” to “somewhat hard” range.

BORG Scale of Perceived Exertion

How does the exercise feel?	Rating
Rest	6
	7
Very, Very Light	8
	9
Very Light	10
	11
Fairly Light	12
	13
Somewhat Hard	14
	15
Hard	16
	17
Very, Hard	18
Very, Very Hard	19
Total Exhaustion	20

Posture Awareness

Posture changes are an inevitable aspect of aging. Daily posture patterns while sitting, sleeping, standing, or performing various physical activities have a cumulative effect on posture alignment as we age. For older adults, posture changes directly affect their ability to balance. However, many changes can be controlled. **Posture checks should be a part of every exercise class that you teach.** Maintaining good posture is not merely for appearance, but also enhances movement efficiency. Correct posture prevents aches and pains, reduces the risk of stumbling or falling, and contributes to improved quality of life.

Correct Standing Body Alignment

- Slight hollow at neck and in lower back
- Ear in line with shoulders
- Chin parallel to the floor
- Shoulders in line with hips
- Ribs lifted
- Knees “soft”
- Weight centered on feet

Correct Sitting Posture

Feet comfortable distance apart (hip or shoulder width)

Knees flexed at a 90 degree angle

Legs parallel with floor, shoulders aligned over hips (let spine assume natural curve)



Neck long

Chin level

Ears over shoulders

Shoulders back and down

Abdomen in

Shoulders over hips

Knees relaxed



Use these cues to check posture with your older adults:

Feet

Comfortable distance apart. Weight evenly distributed on both feet.

Fit Note: Have the participants check the heels of their shoes for signs of uneven wear. This indicates poor distribution of weight while walking. (See “Choosing a Walking Shoe.”)

Knees

“Soft” in the knees. Parallel, so that the toes face forward.

Fit Note: Knees should not be bent or locked but loosely held straight.

Buttocks

Slight tension in the abdominal region with hips aligned over ankles.

Shoulders

Align over hips. Lift chest and rib cage.

Fit Note: Allow spine to assume its natural curve.

Head

Centered squarely above shoulders. Chin parallel the floor. Ears in line with shoulders.

Fit Note: Avoid leaning the head forward.

Use simple cues to remind your class about watching their posture:

- Keep the three curves in your back (at the neck, shoulder blades and lower back).
- Headlights up and pointing forward. (Headlights are the breasts.)
- Your hips are like a bucket for carrying water. You do not want the water to tip out the front, back or sides.
- Your tail lights (buttocks) should shine straight back.

KNOW THE NEEDS OF YOUR STUDENTS

The successful class leader has a good understanding of what is important to older adults.

Characteristics of the older adult include:

- Seeks involvement and “social connection”
- Has individual and unique qualities
- Appreciates personal validation
- Pursues personal growth opportunities
- Has concerns - safety, medical, health related issues

Some older adults who may be coaxed into your class could have:

- Some anxiety attached to de-conditioning
- Fear of falling due to past experiences or potential for falls
- Pessimistic responses - “I can’t,” “don’t like to exercise,” or “I’m too old,” that reflect typical reasons for not exercising

The successful class leader can deflect those kinds of roadblocks with:

- Attention to careful planning
- Using safe procedures
- Showing confidence and humor as a colleague
- Conducting the classes with competency
- Encouragement to overcome obstacles to success and commitment

Guidelines for Clothing and Shoes

It is important for safety reasons that older adults in class wear appropriate clothing. Improperly fitting pants, shirts, and particularly shoes will inhibit movement and contribute to falls. On the first day of class, when you conduct screening and pre-assessment, set aside time to address this issue. The following are basic guidelines that your students can follow.

Shirts and Pants/Sweats or Shorts

- Clothing needs to be comfortable, allowing a full range of motion for all joints.

Shoes

- As gentle as walking is, feet and legs absorb a blow equivalent to twice your body weight with every step. Careful attention to shoe selection is important to maximize comfort and minimize potential for injury.
- Well fitting shoes designed for walking are a must.
- Avoid soles that mark the floor.
- Avoid shoes with slick soles.
- Participants should check soles of their shoes on a regular basis, inspecting them for signs of wear or damage.

Fit Note: Older adults who walk in a scuffling manner will wear soles of their shoes out quickly.

Liability Issues

Class Leader Liability Protection

Your liability as a class leader should be covered by one or more of the following:

- If you are 55 or older and sign up with RSVP (Retired Senior Volunteer Program), you will receive \$1,000,000 in liability insurance.
- Senior centers carry liability insurance.
- Student interns should be covered. Check with your instructor to ensure you are covered.
- Some health districts have coverage for health district volunteers. Check with your health district.
- Students must sign the PAR-Q form. One has been approved by the Idaho Department of Health and Welfare as a liability release.

Participant Screening and Assessment

The following are guidelines for screening and assessment of participants. Screening forms are essential to protect you and participants. Participants may not take the class until they are completely filled out. Assessments also are critical. They will determine the success of your program, and they are a tremendous motivational tool for participants. These items will be found in your site kit.

PAR-Q and You (2002 revision)

The PAR-Q and You (2002 revision) form must be completed and signed by participants before beginning class. Participants are encouraged to talk to their health care provider if they answer “yes” to any of the seven screening questions. When signed, this form has been approved for use as a release of liability waiver by the Idaho Department of Health and Welfare.

See Chapter 8 for form.

Release of Liability Waiver

A signed PAR-Q and You (2002 revision) is approved by the Idaho Department of Health and Welfare. It includes a statement that advises potential class participants to talk with their

health care provider if they answer “yes” to any of seven screening questions. Those who answer “yes” will not be required to talk with their health care provider before class, but they must sign the waiver, indicating they have been advised to talk with a health care provider.

See Chapter 8 for form.

Statement of Medical Clearance for Exercise

The Statement of Medical Clearance for Exercise form is provided for class participants who answer “yes” to any of the seven PAR-Q and You (2002 revision) screening questions, and who plan to visit their health care provider prior to beginning the class series.

See Chapter 8 for form.

3-Meter Timed Up and Go Test - (To be recorded in the *Fit and Fall Proof Physical Activity Diary*)

The 3-Meter Timed Up and Go Test tracks individual improvements over the course of a class series. The number of seconds it takes a person to rise to a standing position, walk three meters, return to the chair, and sit back down has been linked to their risk for falling.

Tests will be done prior to the first class and immediately after the sixth class. Test results will be recorded on page 3 (first test) and page 13 (six week test) of the *Fit and Fall Proof Physical Activity Diary*.

Test instructions can be found in Chapter 8 and in the site kit. Materials required for the test include:

- A chair
- A stopwatch
- A 3-meter measure
- A cone for the 3-meter turnaround point

Additional Measures of Improvement

Questions about fear of falling also will be used to record participant progress. These questions are also found on page 3 (first week of class) and page 13 (sixth week of class) of the *Fit and Fall Proof Physical Activity Diary*.

Fit and Fall Proof Physical Activity Diary

The *Fit and Fall Proof Physical Activity Diary* is provided for participants to record baseline, six-week fall risk measures, and daily physical activities. **These diaries will be collected by health districts to evaluate the impact of the program.** Diaries let participants record their weekly physical activity goals, daily activities, any falls, baseline, and six week progress. The diary also provides tips for preventing falls, maintaining physical activity, and ensuring good nutrition.

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Chapter 4

Safety First

Most older adults, even those individuals with chronic ailments such as arthritis, osteoporosis, diabetes and joint replacements, can participate in physical activity if they are careful. Exercise can help maintain or improve their ability to complete daily activities, increasing their quality of life. Safety is the key. This chapter is devoted to safety issues including basic exercise guidelines, precautions, exercise adaptations, contraindicated exercises, and how minor injuries should be treated.

12 Safety Precautions You Can't Live Without

Consider these safety precautions as you design and implement your class:

1. Know the difference between normal vs. unhealthy reactions to physical activity.

Normal reactions include:

- Increased depth and rate of breathing
- Increased heart rate
- Mild or moderate sweating

Unhealthy reactions include:

- Pain two hours after physical activity
- Excessive fatigue
- Increased weakness
- Joint swelling
- Chest pain or heart palpitations
- Severe shortness of breath

Fit Note: For many people with arthritis or who are beginning an activity program, physical activity can be accompanied by temporary discomfort - muscle aches, muscle fatigue, or soreness. It may be unpleasant, but it is not harmful. Muscle soreness shouldn't last more than a day or two.

2. Respect Pain - Distinguish between normal discomforts of moving a stiff joint and sudden or severe pain caused by a movement that's too intense.

3. Encourage a student to stop the exercise if they experience sharp or undue pain while doing an exercise. If they do experience any kind of unusual discomfort, they need to let you know.

4. Watch for inflammation in a joint where heat, redness, swelling, puffiness or pain occurs (avoid vigorous movement of inflamed joints; consider moving joint gently through its range of motion, if it is not too uncomfortable).

5. Remind students to drink plenty of water during warm and cold weather. (Thirst mechanisms become less efficient as we age, so they may not realize fatigue is caused by fluid shortage.)

6. Discourage students from wearing perfumes which can activate an allergic reaction in other participants. As body temperature rises, perfumes become more intense.

7. Encourage students to keep breathing rather than holding their breath during more challenging exercises.

Fit Note: During physical activity, a beet-red complexion may be a sign of distress. Ask these individuals if they are okay.

8. Note that changes in students' medications or time away from the class due to temporary illness may alter their ability to perform as easily as they had on previous occasions. Be sensitive to their need to complete class activities at a lower intensity.

9. Emphasize “listen to your body,” and watch for signs of over-exertion: unusual fatigue, headache, excessive perspiration, dizziness, leg cramping, chest pain, nausea. (Encourage participants to tell you when any of these symptoms occur.)

10. Ask “Are you okay?” if any participant appears to be having trouble.

11. Emphasize good posture.

12. ENJOY yourself!

Fit Note: Creating a buddy system may be helpful in maintaining personal safety in a class which combines fit to frail levels of ability.

Safe Exercises With Adaptations

Many participants will have chronic conditions that need special attention. For these individuals there may be specific exercises that they will need to avoid or adapt. **The primary rule should be “if it hurts don’t do it,” or in the case of arthritis sufferers, “if it hurts more than normal, don’t do it.”** If one exercise does not work for them, they should be shown a modification or even a different exercise that will work the same muscle group. Consider the following precautions for participants who are managing some of the most common chronic conditions.

OSTEOPOROSIS

Bone mass is lost throughout the body causing bones to become weakened and brittle. It is common in women over 50 and men over 80 and anyone who has taken long-term steroid medications. Bones in the spine, wrist, and neck of the femur are particularly vulnerable.

Do

- Keep the three curvatures in the back (neck, shoulder blades, lower back).
- Use good body mechanics.
- Emphasize gentle impact movements.
- Stabilize the trunk.
- Stretch the hamstrings.
- Sit and stand tall.
- Encourage low impact walking.
- Start slowly, and gradually increase time and action.
- If endurance is impaired, encourage short walking bouts.

Don't

- Forcibly pull the neck forward.
- Excessively bend forward or bend forward while twisting.
- Engage in high impact exercises.
- Excessively load the spine.
- No weighted lifting with arms away from the body.
- Engage in sudden jerky movements.

ARTHRITIS

Arthritis causes inflammation of the joints. It is important for those who suffer from arthritis to keep physically active. If they are starting a physical activity program, they need to begin slowly by first working to improve range of motion and then adding resistance exercises. If they have any joint swelling or pain lasting for more than two hours, they exercised too much. If they have a flare-up, they can gently stretch the joint and do isometric (muscle contraction with no noticeable movement) exercises.

Do

- Increase range of motion.
- Work without resistance until there is minimal joint pain.
- Gradually increase resistance.
- Hold stretches for a shorter period of time if there is joint pain.
- Maintain correct form to prevent further joint problems (neutral wrist position - “See Getting Strong Safely Using Resistance Bands”).
- Relax any gripping motion frequently.

Don't

- Exercise inflamed joints.
- Engage in heavy resistance exercises during flare-ups.
- Put undue pressure on a joint.

Fit Note: If a grip is uncomfortable, wrap the resistance band around the palm of the hand.

JOINT REPLACEMENTS

Total hip and knee joint replacements are very common today. They frequently can restore range of motion for the joint, eliminate pain, and return the patient to normal activities.

Do

- Encourage low-impact exercise.
- Emphasize appropriate strength training.

Don't

- Engage in high-impact activity.
- Bend at the hip more than 90 degrees.
- Cross the leg past the midline of the body.
- Rotate the thigh inward.

CARDIOVASCULAR DISEASE, HIGH BLOOD PRESSURE, PERIPHERAL ARTERIAL DISEASE, PULMONARY DISEASES

The PAR Q and You (2002 revision) is designed to screen for these conditions, and older adults who want to participate in the program are encouraged to talk with their health care provider. These participants should be monitored for shortness of breath, chest pains, and dizziness. If they have any of these signs, they need to stop exercising and seek medical attention.

Do

- Encourage participants to work at their own pace.
- Encourage exercise at a lower intensity.
- If endurance is impaired, encourage short walking bouts.
- Focus on gradually increasing the duration of the exercise as opposed to raising the intensity level.

Don't

- Hold your breath.
- Engage in high intensity exercises.
- Engage in exercises where arms are kept above the head for prolonged periods.

DIABETES

Physical activity is very important for diabetics and can improve ability to control blood sugar levels. Talk to diabetic class participants privately and ask them to have glucose tablets or hard candy on hand in case they have problems.

Do

- Encourage lower-intensity exercises.
- Begin with lighter resistance and gradually increase the level.
- Encourage them to change positions slowly.
- Encourage proper footwear to reduce injuries.
- Begin with short walking bouts and gradually increase the duration.

Don't

- Engage in high-intensity exercises.
- Engage in heavy resistance or straining.
- Engage in jarring-type activities.

BACK PAIN

It is estimated that as many as 80 percent of all people will have low back pain at some time in their life. Low back pain can come on suddenly and go away quickly, or it can persist for months or even years. Frequently, low back pain will limit range of motion in the spine.

Do

- Encourage low-impact exercise.
- Encourage good posture during all exercises (sitting and standing).

- Maintain the three back curves (neck, shoulder blades, lower back).
- Encourage trunk stabilization.
- Use legs as opposed to the back when lifting.
- Balance any weight carried on both sides.

Don't

- Over-arch the back.
- Engage in twisting exercises while bending.
- Lift and twist.
- Engage in high-impact exercises.

Monitoring Exertion

Two methods for monitoring exertion are:

- Talk Test
- BORG Scale of Perceived Exertion

Talk Test

The Talk Test has been used successfully for monitoring physical activities of older adults.

- **Low Level:** Participants can talk easily to each other or sing a song without pausing to take a breath. In this case, they may want to pick up the pace.
- **High Level:** If participants cannot talk at all, they are working at too high a level. In this case, they need to reduce their level of exertion.

BORG Scale of Perceived Exertion

The BORG Scale of Perceived Exertion can be used to monitor physical activity levels based on the participant's overall feeling of effort and physical fatigue.

- **At Rest:** Participants are at a "6."
- **Somewhat Hard:** Participants are at about "13."
- **At Maximum Exertion:** Participants are at "20."

Ask participants how hard they feel they are working after 5 to 10 minutes of physical activity. For many older adults the goal is "somewhat hard," a level they can sustain for a period of time without undue fatigue.

****The BORG Scale of Perceived Exertion can be found on page 17.****

Muscle Soreness

Muscle soreness can occur whenever an exercise is performed for the first time, particularly for the newcomer. Acute muscle soreness happens immediately following the exercise, while it is not unusual for a delayed soreness to occur a day or several days after exercise. Acute and delayed soreness usually go away as muscles adapt to a new workload.

If pain or discomfort does not go away after a few days or the pain is severe, the participant should consult a physician or health care provider to check out the possibility of an injury. Recommended treatment for a possible injury is the PRICE Rule:

- Protect the injured area.
- Rest by decreasing activity.
- Apply ice to reduce swelling.
- Wrap injured area with a flexible bandage.
- Elevate to reduce blood flow to the injured area.

The participant can resume gentle stretching and strengthening exercises as swelling and discomfort go away.

Contraindicated Exercises

Some exercises should never be used because they have the potential to cause harm.

Do Not Use

Pulling the head forward with excessive hand pressure can cause injury to the spine and is especially dangerous for individuals with osteoporosis.



Do Not Use

Excessively bending the neck backward can cause vertigo and dizziness. Gentle forward motions are acceptable.

Do Not Use

Excessively bending the back backwards while standing or sitting can put extra pressure on the lumbar spine. Avoid these positions:



Do Use

Acceptable alternative: Leg lift.



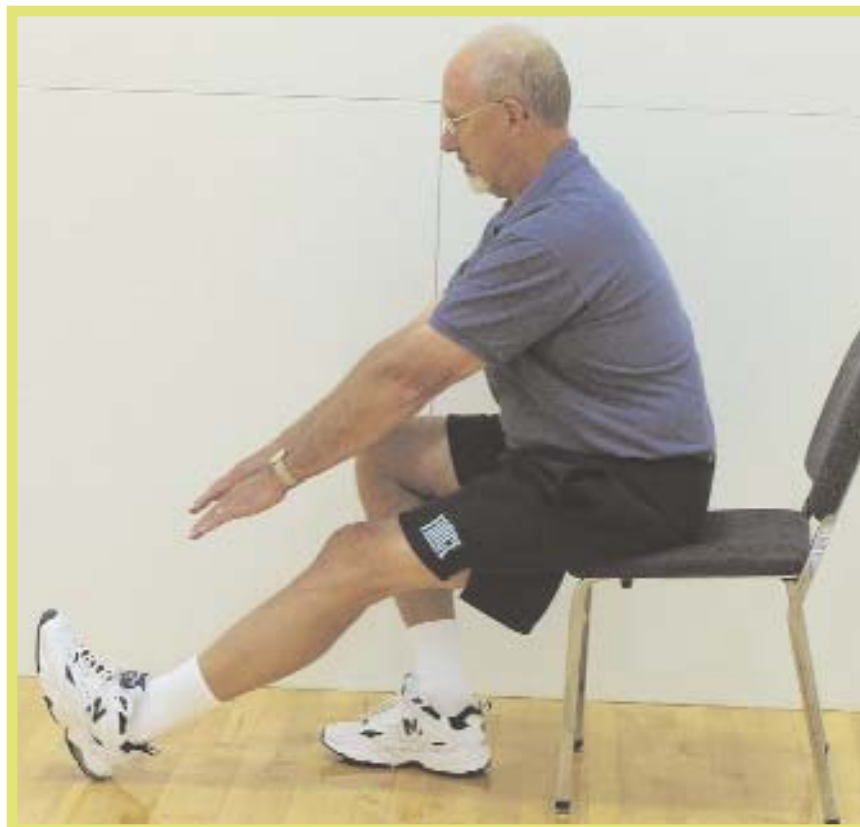
Do Not Use

Standing or twisting toe touches. Bending forward while twisting puts undue pressure on the lumbar spine and can cause injury, particularly for participants with osteoporosis.



Do Use

Acceptable alternative for toe touches: Keep the back straight and stabilize the torso before reaching forward.





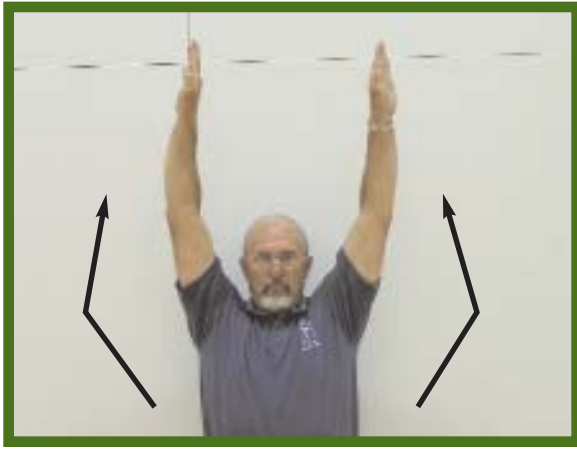
Do Not Use

No excessive bending of the knee joint. It puts undue pressure on the joint.

Do Use

Acceptable alternative quad stretching exercises: Move the thigh backward.





Do Not Use

Side lifting arms over head with palms down. The picture shows final position. This can cause an impingement injury in the shoulder joint.

Please note palms are facing out.



Do Use

Acceptable alternative exercise: Arms overhead with palms up.

Please note palms are facing in.

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Chapter 5

Designing a Successful Activity Program

This section provides you with the basics to organize your class, including teaching and class management.

Designing a Successful Activity Program

The Fit and Fall Proof program presents activities that address balance.

Goals of the program:

- Improve flexibility and range of motion
- Increase muscular strength and endurance
- Improve posture and mobility
- Decrease anxiety about falling
- Provide a social experience within a safe environment for appropriate physical activity

Objectives:

- Teach stretches and gentle joint range of motion activities
- Teach strength exercises
- Practice walking and other dynamic balance activities
- Provide opportunities to practice balance training
- Provide a safe and comfortable environment for fitness-related activity components

Each class includes exercises in these categories:

- Warm-up - includes flexibility and locomotor activities
- Stretching for flexibility and joint range of motion
- Strength training using resistance bands
- Cool down - includes locomotor and balance activities

Fit Note: As a class leader, you must select appropriate activities that address the needs of participants. Explore and experiment to find challenging ways to do the exercises.

Effective Class Management

Before Class Begins

- Know your site.
- Have a well-defined emergency plan.
- Check out physical space as a safety precaution. Look for loose cords, slick spots on the floor, unattached carpet, and defective chairs that could contribute to the likelihood of a fall.
- Note air temperature and access to activity area as well as classroom space.
- Create a positive atmosphere with background music (not too loud). Instrumental music is preferable because many people have hearing loss.
- Be available for every class in your session, if possible. Participants identify strongly with the instructors and feel “let down” if an instructor does not show up. If you must be absent, make appropriate arrangements ahead of time.

Instructional Methods

- Make students feel welcome. Greet participants by name and encourage interaction with one another.
- Give positive reinforcement - smiles, encouragement and support.
- Start each class on time.
- Make sure every participant can see and hear you.
- Keep directions simple and direct.
- Be flexible. Vary the class according to energy needs of participants. Pay attention to body signals, and respond appropriately.
- Use familiar “landmark” exercises that students enjoy and feel comfortable doing, but vary the format to encourage interest. Start slowly and build gradually, finding ways to challenge the class with more advanced activities, distribute handouts on pertinent topics, use resistance bands, or increase repetitions.
- Vary moves to avoid overstressing weight-bearing joints.
- Avoid abrupt or severe turns or twisting that compromise joints (especially the knee).
- Use gradual transitions, cue clearly and well in advance.
- Teach footwork before arm work.
- Respect pain or discomfort (check students’ safety precautions and contraindicated exercises).
- Model good body mechanics - sit and stand tall.
- Instruct students to breathe out as they move against resistance and breathe in as they return to a starting position.
- End class on an upbeat note to enhance a sense of camaraderie as well as individual well-being.

Choosing Music

Music is an excellent tool to motivate, entertain, or add variety to the program. Select music, preferably instrumental, from oldies, jazz, swing, or pop familiar to participants. Encourage them to bring in favorite songs and to use in class. When selecting music, keep this in mind:

- Play it at low volume. For students with hearing aids, music can interfere with their ability to hear you.
- Progress from slow to up-tempo songs for warm-up.
- Play slow music for cool down and resistance training.
- Avoid music that causes exercisers to use fast, jerky movements.
- Avoid fast-tempo music that inhibits full range of motion.

Adding Variety

There are many options attached to a single exercise that challenge and add variety to your lesson plan. For example, take the one-leg stand:

- Change arm positions
- Eyes open/closed
- Moving the head
- Staying on one leg for 30 seconds
- Shifting from one leg to another
- Up on toes

As you add variation to a balance activity, think about how the performance of a particular exercise might improve functional skill.

Chapter 6

Exercises

Many people mistakenly believe the best way to decrease risk of falling is to move as little as possible. Just the opposite is true. Not moving vastly increases the chance of falling, because muscles weaken from lack of use, and reflexes don't respond as quickly. Working on moving, flexibility, locomotor, balance and strength will improve one's chances of living long and well. Exercises from each of these four categories are included in each class to provide a complete workout:

1. Flexibility
2. Locomotor
3. Balance
4. Resistance

Each class includes exercises in these categories:

- Warm-up - flexibility and locomotor activities
- Stretching for flexibility and joint range of motion
- Strength-training using resistance bands
- Cool down - locomotor and balance activities

Several exercises are provided for each category. There are two purposes for this:

1. To provide exercises for each of the major muscle groups. For instance, to provide flexibility exercises for the neck, shoulders, arms and wrists.
2. To provide the class leader with a variety of exercises so they can change class content over time.

Exercise List

This table lists exercises included in this manual, the page where they can be found, the phase in which they can be used and the muscle area they will be working. Flexibility Exercises are designated with an F, Locomotor with an L, Balance with a B, and Strength with an S. The phases of the exercise class are Warm-up, Locomotor and Balance, Resistance and Cool down.

Exercise Number	Exercise Name	Page Number	Exercise Phase			
			Warm-up	Locomotor	Balance	Resistance
F1	Forward Neck Stretch	44	X			X
F2	Neck Side Stretch	44	X			X
F3	Head Turn Neck Stretch	44	X			X
F4	Chin Tuck	45	X			X
F5	Shoulder Stretch	45	X			X
F6	Penny Squeeze	45	X			X
F7	Arm Across	46	X			X
F8	Triceps Stretch	46	X			X
F9	Wrist Flexion	46	X			X
F10	Wrist Extension	47	X			X
F11	Side Reach	47	X			X
F12	Standing Hip Stretch	48	X			X
F13	Standing Hamstring Stretch	49	X			X
F14	Standing Quad Stretch	49	X			X
F15	Standing Calf Stretch	50	X			X
F16	Ankle Circles	50	X			X
F17	Toe Extensions	50	X			X
L1	Walking in a Circle	53	X	X	X	X
L2	Fast and Slow Pace Walking	53	X	X	X	
L3	Forward and Backward Walk	53		X	X	
L4	Diagonal Walk	54		X	X	
L5	Box Walk	54	X	X	X	
L6	Marching	54	X	X	X	

Exercise Number	Exercise Name	Page Number	Exercise Phase			
			Warm-up	Locomotor	Balance	Resistance
B12	Posture Pull Down	67	X	X	X	X
B13	Tailor Raises	67		X	X	X
B14	Tightrope Walker	67		X	X	X
B15	Tip Toes	68	X	X	X	X
B16	Real Swinger	68		X	X	X
B17	Rock and Roll	69		X	X	X
B18	Romberg Drill	69		X	X	X
B19	Shake It Up and Stretch It Out	70		X	X	X
B20	Slide Trombone	70		X	X	X
B21	Squat and Raise	71		X	X	X
B22	Spin Cycle	71		X	X	X
B23	Standing Heel Raises	72		X	X	X
B24	Sumos	72		X	X	X
B25	Wall Push Ups	72		X	X	X
B26	Stork	73		X	X	X
S1	Biceps Curl	77				X
S2	Back of Arm Press-Back	77				X
S3	Lateral Raise	78				X
S4	Windshield Wiper	78				X
S5	Seated Upright Row	78				X
S6	Overhead Pull Down	79				X
S7	Chest Press	79				X
S8	Partial Squats	79				X
S9	Side Leg Lift	80				X
S10	Hamstring Curl	80				X
S11	Seated Calf Press	80				X
S12	Knee Lift	81				X

Flexibility Exercises

The following stretching exercises can be used in the warm-up phase or the cool down phase.

Warm-up Phase: Stretching prepares the body for more vigorous movements and can prevent injuries. Stretches in this phase typically are held for shorter periods of time.

Cool Down Phase: Stretching increases flexibility. You will need to have students hold stretches to a point where there is tension but no pain.

Exercise Menu

- F1. Forward Neck Stretch
- F2. Neck Side Stretch
- F3. Head Turn Neck Stretch
- F4. Chin Tuck
- F5. Shoulder Stretch
- F6. Penny Squeeze
- F7. Arm Across
- F8. Triceps Stretch
- F9. Wrist Flexion
- F10. Wrist Extension
- F11. Side Reach
- F12. Standing Hip Stretch
- F13. Standing Hamstring Stretch
- F14. Standing Quad Stretch
- F15. Standing Calf Stretch
- F16. Ankle Circles
- F17. Toe Extensions

F1. Forward Neck Stretch

Description

- Tuck chin to the rear and bend neck forward, bringing chin toward chest as if trying to hold an orange under the chin.
- Hold for 10-30 seconds.



F2. Neck Side Stretch

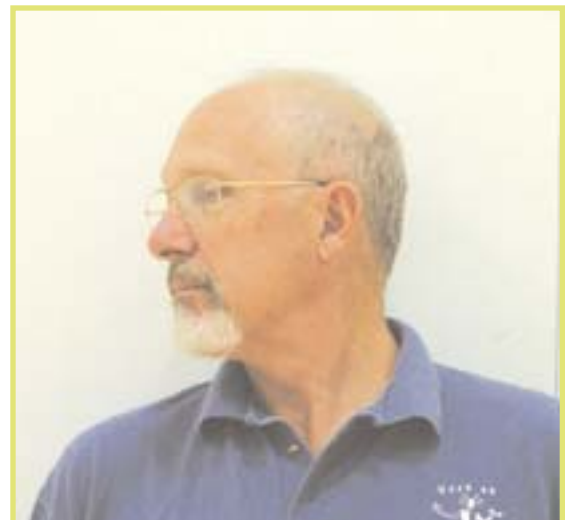
Description

- Slowly tip head to the left while pressing right shoulder down.
- Hold 10-30 seconds.
- Repeat, tipping head right.

F3. Head Turn Neck Stretch

Description

- With shoulders back and down, turn head to the right and tip chin down to right shoulder.
- Hold 10-30 seconds.
- Repeat, turning head left.



F4. Chin Tuck

Description

- With shoulders held back and down, tuck chin, pulling in.
- Hold 10-30 seconds.



F5. Shoulder Stretch

Description

- Place right hand, thumb up, in middle of lower back.
- Gently raise hand toward shoulder blades.
- Hold 10-30 seconds.
- Repeat for other arm.

F6. Penny Squeeze

Description

- Pretend to squeeze a penny between shoulder blades.
- Hold 10-30 seconds.

F7. Arm Across

Description

- Extend right arm to front and cross toward the left at shoulder height.
- With left hand gently grasp right arm above the elbow, pull it toward the left side.
- Hold 10-30 seconds.
- Switch and repeat for left arm.



F8. Triceps Stretch

Description

- Raise right arm above head, and pat yourself on the back.
- With the left arm behind and toward lower back, slide hands toward each other.
- Switch arm positions and repeat.

F9. Wrist Flexion

Description

- Flex right wrist, pointing fingers toward the ground.
- With the left hand, gently press the back of the right hand and hold 10-30 seconds.
- Switch and repeat for left hand.

F10. Wrist Extension

Description

- With right arm held parallel with floor, extend wrist, pointing fingers toward ceiling.
- With the left hand, gently press right palm.
- Hold 10-30 seconds.
- Switch and repeat for left hand.



F11. Side Reach

Description

- Extend right arm over the shoulder.
- Reach right arm up and over the left side.
- Switch and repeat for left side.

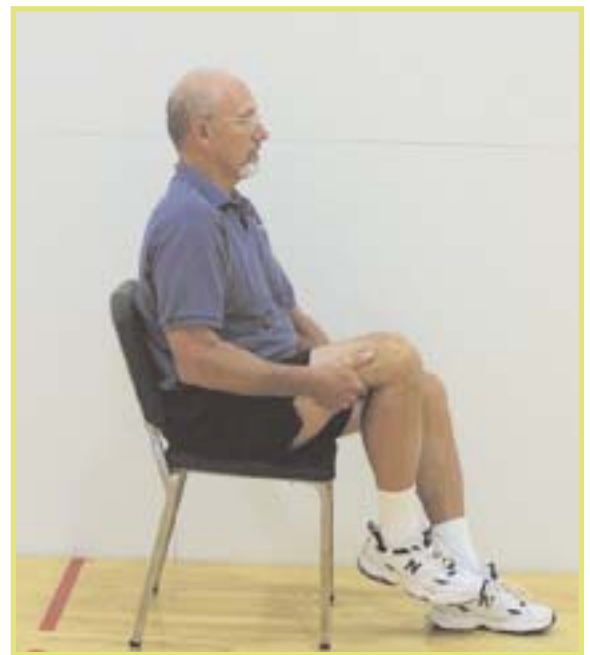
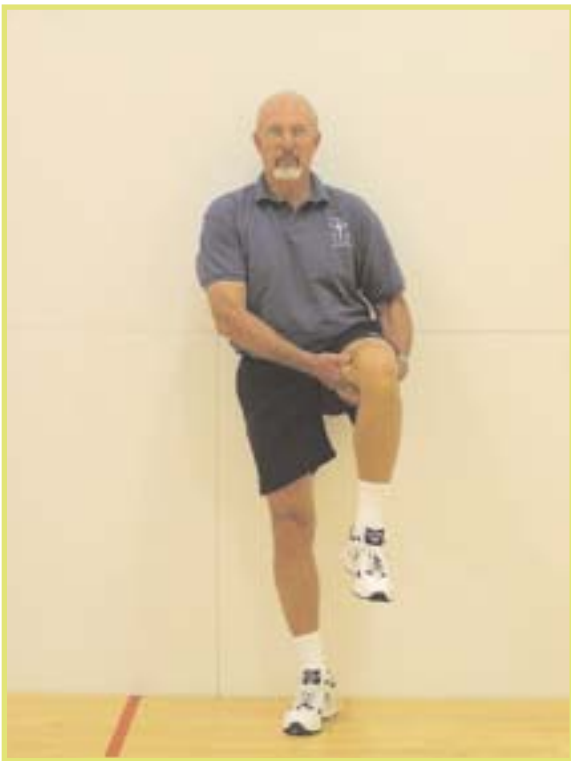
F12. Standing Hip Stretch

Description

- Stand with back against a wall and stabilize torso.
- Lift right leg with knee bent and grasp leg with both hands, bringing knee gently to the chest.
- Hold 10-30 seconds.
- Switch and repeat for left leg.

Precaution: Keep torso stabilized and the three curves in the back (at the neck, shoulder blades, and lower back).

Precaution: This stretch is not for individuals who have had hip replacements.



F13. Standing Hamstring Stretch

Description

- Step right leg forward in a stride position.
- Bend left knee and place both hands on left thigh for support, keeping three curves in the back (at neck, shoulder blades, and lower back).
- Extend right leg and, leaving the heel on the ground, bring toes of right foot back toward the face.
- Keeping the back straight, slowly bend forward at the hip.
- Hold 30 seconds.
- Switch and repeat for left leg.

Precaution: The chest should move toward the thigh. Shoulders and back should not curl forward.



F14. Standing Quad Stretch

Description

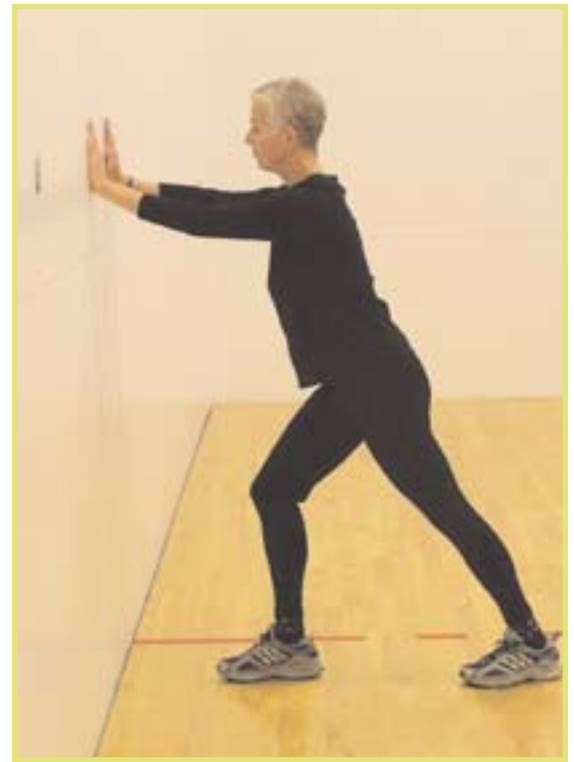
- Stand with left hand on wall.
- Bend right knee backward, bringing foot up toward the thigh as far as is comfortable.
- Keeping abdominals tight and torso stabilized, move right leg backward without locking the knee.
- Hold 30 seconds.
- Switch sides and repeat for left leg.

Precaution: Do not arch the back when thigh is moved backward.

F15. Standing Calf Stretch

Description

- With both hands on wall, stand with left leg forward and right leg back.
- Keeping torso erect, bend left knee while keeping right leg straight and heel on the ground.
- Hold 30 seconds.
- Maintaining the left leg position, bend right knee while still keeping the heel on the ground.
- Hold 30 seconds. Switch and repeat for left calf.



F16. Ankle Circles

Description

- Stand with left hand in contact with wall, pick right foot off the ground, and circle the ankle clockwise five times.
- Circle the ankle five times counter-clockwise.
- Switch and repeat for left ankle.

Variation: Write your name on the floor with your big toe.

F17. Toe Extension and Flexion

Description

- In a standing position, lift toes of both feet toward ceiling.
- Hold 10 seconds.
- Curl toes as tight as possible, and hold 10 seconds.

Locomotor Exercises

These exercises stimulate the cardiorespiratory system by elevating heart and breathing rates. **It is very important that participants exercise at their own pace.** To achieve this, create an atmosphere where they feel comfortable “doing their own thing.” Demonstrate modifications, and **verbally remind them to listen to how their body is feeling.**

To assess participants’ exercise level during this phase use the **Talk Test**:

Talk Test

- **Low Level:** Participants can talk easily to each other or sing a song without pausing to take a breath. In this case, they may want to pick up the pace.
- **High Level:** If your participants cannot talk, they are working at too high a level. In this case, they need to reduce their level of exertion.

Basic Rules for Locomotor Exercises

- Begin leg actions first. When your participants have learned leg movements, add arm actions.
- Balance the exercises. Move to both the left and right equally.

Exercise Menu

- L1. Walking in a Circle
- L2. Fast and Slow Pace Walking
- L3. Forward and Backward Walk
- L4. Diagonal Walk
- L5. Box Walk
- L6. Marching
 - a. Marching Arms
 - b. Drum Major
 - c. Side Pushes
 - d. Rope Climbs
 - e. Press Downs
 - f. Forward Presses
- L7. Basic Arm Movements for Marching and Walking
- L8. Motor Car Walks
- L9. Toe Walking
- L10. Step Backs
- L11. Lifts to the Rear
- L12. Step Kicks
- L13. Grapevine
- L14. Heel Taps
- L15. Step Together Step Variations
- L16. Tandem Walk
- L17. Three Tap Around
- L18. Cross Over Walk

L1. Walking in a Circle

Description

- Basic walking motion.
- Walk in a large circle left.
- Repeat, moving right.

Variations: Add any arm actions listed under *L7 - Basic Arm Actions*.

Precautions: Encourage participants to pick their own pace.

L2. Fast and Slow Pace Walking

Description

- Basic walking motion.
- Vary walking pace.
- Walk fast with small steps and large steps at a slower pace.

Variations: Add arm actions listed under *L7 - Basic Arm Actions*.

Precautions: Encourage participants to pick their own pace.

L3. Forward and Backward Walking

Description

- Basic walking motion.
- Vary walking pace moving forward and backward.

Variations: Add arm actions listed under *L7 - Basic Arm Actions*.

Precautions: Encourage participants to pick their own pace.

L4. Diagonal Walk

Description

- Basic walking motion.
- Walk diagonally forward to the right eight steps and diagonally backward eight steps to the starting position.
- Repeat, moving diagonally to the left.

Variations: Add arm actions listed under *L7 - Basic Arm Actions*.

Precautions: Encourage participants to pick their own pace.

L5. Box Walking

Description

- Basic walking motion.
- Walk in a box pattern.

Variations: Add arm actions listed under *L7 - Basic Arm Actions*.

Precautions: Encourage participants to pick their own pace.

L6. Marching

Description

- Begin in a standing position.
- Raise right knee 45 degrees to the front.
- Set right leg down and raise left knee to the front 45 degrees.
- Repeat, alternating legs.

Variations: Add arm actions listed under *L7 - Basic Arm Actions*.

Precautions: Encourage participants to modify height the knee is lifted.

L7. Basic Arm Actions for Walking and Marching

These arm actions can be added to walking and marching exercises to increase exercise intensity.

Precautions: All motions should be controlled.

Variations

a. Marching Arms

- Begin with both arms bent 90 degrees.
- When right knee is raised left arm is moved forward, and right arm moves backward.
- Alternate so right arm is forward when left leg is raised.

b. Drum Major

- Begin with left arm extended forward at shoulder height and right arm bent 90 degrees at the elbow.
- Bend left arm bringing hand toward shoulder, while extending right arm forward at shoulder height, as in pushing.
- Alternate arm action, and combine with marching action.

c. Side Pushes

- Begin with left arm extended at shoulder, high and to the left. Right arm should be at shoulder level with right elbow bent so right hand is just below the chin.
- Switch positions with right arm extending to the right side in a punching action, and left arm bending.
- Repeat in an alternating fashion and combine with marching.

d. Rope Climbs

- Begin with right arm extended diagonally in front of body (where you can see the hand) and left arm bent.
- Switch arm positions in an alternating fashion as though you are climbing a rope.
- Repeat.

e. Press Downs

- Begin with elbows bent and hands in front of shoulders.
- Extend both arms down and back in a pressing motion.
- Return to starting position.

f. Forward Presses

- Begin with elbows bent and hands in front of shoulders.
- Extend both arms forward and return to starting position.

L8. Motor Car Walks

Description

- Begin in a standing position.
- Bend knees and lower the body, keeping torso erect with hands in front holding a pretend steering wheel.
- Walk in bent-knee position “steering” your car in and out around the room.

Precaution: If bent-knee position is not comfortable, have participants use a basic walking pattern.



L9. Toe Walking

Description

- Walk on toes.

Variation: Add arm actions listed under *L7 - Basic Arm Actions*.

L10. Step Backs

Description

- Begin in a standing position.
- Step right leg back and swing right arm forward 45 degrees, left arm down and behind body.
- Step right foot down beside left foot, then step left foot back, switching arm position.

Variation: Begin with elbows bent and hands in front of shoulders. Extend arms forward at shoulder when foot steps back, and return to starting position when feet are together. Repeat.

Precautions: To prevent bending of the back, arms should not be raised above shoulders.



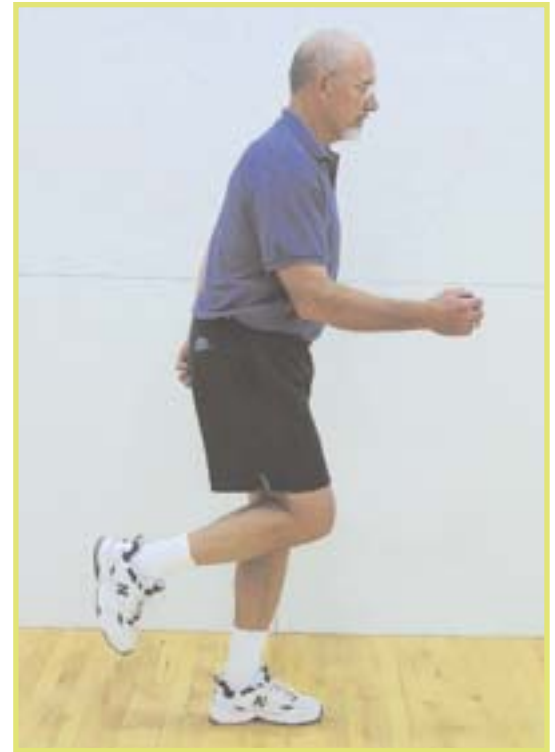
L11. Lifts to the Rear

Description

- Begin in a standing position.
- Lift right leg to rear, bending knee 45 degrees.
- Step foot back in place, repeat for left leg, and alternate.

Variations: Add Forward Presses or Press Downs found under *L7 - Basic Arm Actions*.

Precaution: Keep abdominal muscles tight to prevent bending the back.



L12. Step Kicks

Description

- Begin standing.
- Step right foot forward and kick left foot forward, while swinging right arm forward 45 degrees, and left arm backward.
- Step on left foot and kick right foot forward, while switching arms and swinging left arm forward and right arm back.
- Repeat.

Variations

Kick Outs

- Kick legs out to side.

Kick Across

- Kick legs across in front of body. (This should not be done by those with hip replacements.)

Moving Step Kicks

- Move forward eight kicks and backward eight kicks.

Knee Lifts

- Lift knee 45 degrees instead of kicking lower leg out.

Arm Actions

- Add Drum Major, Forward Presses, or Press Downs listed under *L7 - Basic Arm Actions*.

Precaution: Leg should be kicked forward only 45 degrees.

L13. Grapevine

Description

- Step left foot across and in front of right foot.
- Step right with right foot.
- Step left foot behind right foot.
- Step once again to the side with right foot.
- Repeat three times. On the last time, instead of stepping to the side with the right, tap right foot in place.
- Cross it across and in front of left foot.
- Continue moving left, and repeat three times.

Precaution: Individuals with hip replacements need to modify the pattern. Instead of crossing one foot in front or behind, those with hip replacements can step with left foot next to right foot, step right with right foot, and then step left foot next to right foot.

Precaution: This step is complicated for some individuals. Teach pattern slowly, and do not use arm motions.



L14. Heel Taps

Description

- Lift right leg forward, and touch right heel to ground.
- Bring right leg back and set foot next to the left.
- Repeat with left leg.

Variations

Heels to the Side

- Touch heels diagonally to the side.

Add Arm Presses (listed under *L7 - Basic Arm Actions*)

L15. Step Together Step Variations

Descriptions

- Step to the right side with right foot.
- Close left foot to the right.
- Step the right foot right again, and tap left foot next to the right.
- Repeat, beginning with left foot and moving to the left.

Variations

Step Together Step Knee Lift

- Lift left knee 45 degrees instead of tapping.

Step Together Step Kick

- Kick leg forward instead of tapping.

Forward Step Together Step Kicks

- Walk forward and kick the leg instead of tapping.

Add Arm Circles

- Begin with elbows bent and hands in front of shoulders.
- Moving right, on the first step, circle hands in a counter-clockwise direction, completing a small circle on the second step.
- On the next step to the right, circle arms counter-clockwise again, this time in a larger circle, ending with arms extended horizontally right when left foot does the kick or tap or knee-lift.

Precaution: Foot action should be taught slowly and without arm motion. Arms action needs to be completed in a controlled fashion. (Do not allow participants to fling their arms.)

L16. Tandem Walk

Description

- Step with the right foot forward.
- Place left foot directly in front of the right, touching the heel.
- Repeat, walking forward.



L17. Three Tap Around

Description

- While standing on right leg, cross left foot in front and tap left toe.
- Still balancing on right leg, tap left foot in front of the body.
- Continue balancing on right leg and tap left foot diagonally left.
- Switch legs and repeat, tapping with right foot.

Precaution: Individuals who have had a hip replacement need to modify the activity and tap the foot in front of the body, instead of crossing the leg.

L18. Cross Over Walk

Description

- Lift right foot and cross it in front of the left.
- Moving forward, cross left foot and place it in front of the right.
- Repeat.

Precaution: Individuals with hip replacements need to modify the exercise by placing the foot in front of the other foot, instead of crossing over.

Balance Exercises

Exercises that “get you on your feet” are important for building balance. Because many exercises found in Locomotor Exercises get you “up and moving,” they also build balance. Therefore, the following two rules also apply to balance exercises.

Basic Rules for Balance Exercises

1. Begin instructing leg actions first. When participants have learned leg movements, add arm actions.
2. Balance the exercises. Move to left and right equally.

Exercise Menu

- B1. Ankle Sequence
- B2. Balancing Act
- B3. Chair Stands
- B4. Chorus Line
- B5. Elevator Going Up and Down
- B6. Faux Jumps
- B7. Footprints
- B8. Hydrants
- B9. Ice Cream Cone
- B10. Partial Lunge
- B11. Pedaler’s Pose
- B12. Posture Pull Down
- B13. Tailor Raises
- B14. Tightrope Walker
- B15. Tip Toes
- B16. Real Swinger
- B17. Rock and Roll
- B18. Romberg Drill
- B19. Shake It Up and Stretch It Out
- B20. Slide Trombone
- B21. Squat and Raise
- B22. Spin Cycle
- B23. Standing Heel Raises
- B24. Sumos
- B25. Wall Push Ups
- B26. Stork

B1. Ankle Sequence (sitting in a chair)

Description

- Circle foot at the ankle without moving lower leg.
- Flex and extend ankle.
- With heels on floor, tap toes.
- With toes on floor, tap heels.
- Lift toes for three counts, lower on four.
- Windshield wipers - toes moving right to left, toes moving together and apart. Windshield wipers can be performed with legs still, not turning knees, or with legs moving.
- Windshield wipers with heels.
- Working one foot at a time, roll back and forth from heel to toe. Then do with both feet.

Variations: This is a seated series of exercises that can be done as a full or partial sequence. Some may be performed standing.

B2. Balancing Act

Description

- Stand tall with hands resting on a stationary chair placed in front of the body.
- With both hands on chair, bend right leg at knee, so foot is behind the body.
- Lean slightly forward toward chair. Straighten right leg behind the body to a comfortable position, and gently point toes.
- Bend knee. Return to starting position and relax.
- Repeat with left leg.
- “Play the piano” on chair with fingertips, slowly raising arms to the balance point.
- Extend right leg behind the body, leaning toward chair. Hold for a count of three and repeat using left leg.
- Repeat sequence with feet placed a little further away from chair.

Fit Note: Remember, if participants feel they are losing their balance, encourage them to place their hands back onto the chair to steady themselves.

B3. Chair Stands

Description

- Sit at front edge of chair with arms crossed over chest or placed on thighs.
- Stand up completely and sit back down.

Fit Note: It may be more beneficial to perform this exercise slowly and for a longer period of time to increase muscle strength and endurance.



B4. Chorus Line

Description

- Stand tall, feet together, and arms at balance point.
- Lift left knee so that foot is just off floor.
- Straighten left leg in front of the body.
- Return to a bent-knee position, and lower left foot to floor.
- Relax and repeat with the right leg.

Advanced Variation

- When leg is straight, point toes and stretch to a count of three.
- Gently “push” heel forward toward floor and hold to a count of three.
- Flex ankle, bringing toes up toward the body, then down and away from the body.
- Gently, with ankle loose and relaxed, rotate ankle clockwise and then counter-clockwise.

B5. Elevator Going Up and Down

Description

- Sit in a stationary chair with feet a comfortable distance apart and arms at sides, or hands resting on knees or thighs.
- Move upward as if on an elevator going up one floor at a time, and stopping (holding the position) for a few seconds at each floor.
- Repeat in reverse, returning to sitting position.



B6. Faux Jumps

Description

- Pretend to vertically jump without leaving the ground.
- Explode up with full arm swing.

Precaution for those with osteoporosis: Avoid vertical jarring.

Advanced Variation

- Leave the ground when jumping.
- Land gently with “give” in the knees.

B7. Footprints

Description

- Stand with feet close together.
- Press feet into floor attempting to make a complete footprint with each foot, as if standing in wet concrete or sand.
- Cross arms over chest.

B8. Hydrants

Description

- Face a supporting chair or wall, feet astride
- Shift weight onto left leg and raise right leg sideways.
- Lead with the heel, keeping right knee facing forward.
- Do not bend right hip.
- Keep trunk upright.
- Build up to 8-10 repetitions on each side.

B9. Ice Cream Cone

Description

- Stand with feet close together and pressed to floor (as in Footprints).
- Imagine feet in the bottom of an ice cream cone with shoulders at top.
- Roll around in the cone, shoulders touching the inside of the cone, movement coming from the ankles.
- Keep knees, hips, waist, shoulders, and head still.

B10. Partial Lunge

Description

- Stand straight with feet comfortably apart.
- Rest right hand on back of chair or wall.
- Shift weight to right leg and extend left leg in front, in slight lunge position.
- Keep torso upright and bend knees.
- Align front knee above ankle.
- Keep upper body upright, and return to start position.
- Repeat with other leg.



B11. Pedaler's Pose

Description

- Stand tall, feet slightly apart and arms extended out at shoulder level.
- Raise the right knee, putting the foot on a make-believe bicycle pedal that is just off the floor.
- Point the toes downward.
- Start to “pedal” by moving the right foot in a downward, circular path and brushing the floor with the toes.
- Return the right foot to the floor and relax.
- Repeat with the left leg.

Variations

Praying Pedaler

- Close the eyes during Pedaler's Pose.
- Place hands in praying position in front of chest.
- Drop head gently, chin toward chest.
- Close eyes.
- Bend one knee and lift heel toward buttocks.
- Try to maintain balance while counting slowly to five.
- Work up to 10 and beyond.

Slow Back Spin

- Bend right knee and gently place toes of right foot on floor behind torso.
- Lift right heel toward buttocks.
- Move toes in a small, slow, gentle circle, first clockwise, then counter-clockwise.
- Lower right foot to floor and repeat with left leg.

Side-Winder

- Lift right leg out to the side.
- Complete two small circles, clockwise.
- Lower leg and relax.
- Repeat, using left leg.

B12. Posture Pull Down

Description

- Stand with knees bent, or sit.
- Stretch arms above head, slightly apart, palms forward.
- Pull elbows down toward sides/back, exhaling and contracting abdominal muscles.
- Pull shoulders and scapula back, down, and together.



B13. Tailor Raises

Description

- Standing and pretend to pick up a marble with toes of right foot.
- Lift the “marble,” bending ankle inward and raising knee.
- Repeat, bending ankle to the outside.
- Repeat for left ankle.



B14. Tightrope Walker

Description

- Use a taped line on floor as a substitute for a balance beam.
- Walk forward and backward.

Variations

- Walk turning head side to side.
- Lift knees while walking forward and backward.
- Left knee, extend, and step forward.
- Swing leg and step forward.
- Tandem walk (see L16).
- Walk sideways.
- Crossover walk (see L18).

B15. Tip Toes

Description

- Stand with feet slightly apart.
- Raise up on toes and hold.
- Take a step, if needed, to maintain balance.

Variations

Heel Walks

- Walk with toes raised as high as possible.

Standing with Toes on a Step

- Standing on a short step lower body so heels are lower than top of step.
- Raise up as high as possible.
- Drop down slowly.

Flat Ground Rise-Ups

- From flat ground, rise up quickly.
- Hold for a count.
- Return to flat ground.

B16. Real Swinger

Description

- Stand tall, feet slightly apart, arms in a position that provides balance.
- Bend right knee.
- Cross right foot over left foot, touching right toes to floor.
- With knee still bent, gently swing right leg from front position to behind leg, touching right toes to floor.
- Return to starting position.
- Repeat using left leg.

Precaution: Participants with hip replacements should avoid this activity so they don't go past their midline with their legs.

Variation

- Gently “swing” leg front and back, without toes touching floor.

B17. Rock and Roll

Description

- Stand with feet close together.
- Roll from side to side feeling edges of feet in contact with floor.
- Rock forward and back, keeping heels and toes on floor.

B18. Romberg Drill

Description

There are four parts to the drill:

- Normal stance with feet a few inches apart.
- Feet together.
- Semi-tandem - step forward with one foot.
- Tandem - bring back foot up behind forward foot.

Arms are crossed over chest, or in any other position that maintains balance.

In each of the listed positions, participant practices:

- Standing still.
- Eyes open.
- Eyes closed (if capable).

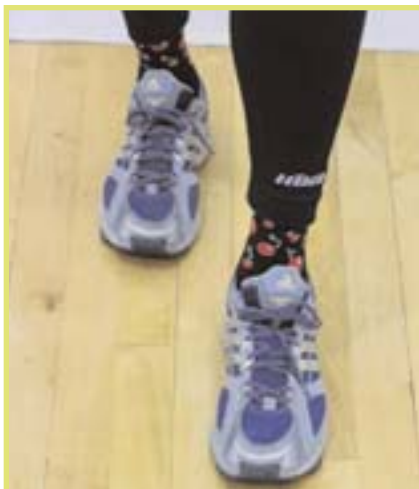
Step 1



Step 2



Step 3



Step 4



B19. Shake It Up and Stretch It Out

Description

- Stand tall, feet comfortably apart, arms at sides.
- Stretch arms up over head, palms inward.
- Stretch arms out to sides, palms facing floor, and stretch fingertips toward floor.
- Relax, feeling an overall “looseness,” as if arms and whole body were “cooked spaghetti” - face, eyes, lips, neck, right down to the toes.
- Shake right arm.
- Shake left arm.
- Wiggle buttocks.
- Keep moving arms, legs and buttocks until loose and relaxed.



B20. Slide Trombone

Description

- Stand on right leg.
- Slide left leg from ankle to knee of right leg, with foot in contact with right leg.
- Repeat while standing on left leg and sliding right leg.

B21. Squat and Raise

Description

- Stand with feet a comfortable distance apart.
- Squat (small knee bend).
- Straighten and roll up onto toes.
- Lower to starting position.

Advanced Variation

- Perform on single leg for more intense strength training.

B22. Spin Cycle

Description

- Stand tall, feet slightly apart, arms at sides.
- Raise right knee so foot is just off floor.
- Lift arms to side at shoulder level, and trace small clockwise circles in the air.
- Lower right leg and arms and relax.
- Repeat, using left leg.
- Again, raise right knee so foot is just off floor.
- Stretch arms up in a “V,” palms inward, and trace small clockwise circles in the air.
- Lower leg and arms and relax.
- Repeat, using left leg.
- Bend right leg at the knee so foot is behind torso and just off floor.
- With arms hanging loosely at sides, gently trace small clockwise circles.
- Lower leg and arms and relax.
- Repeat, using left leg.

Variations

- With arms in positions described above (at shoulder level, in a “V,” below shoulder level), trace circles in the air, clockwise and counter-clockwise.
- Once arm movements are mastered, trace simultaneous circles with raised foot.
- Trace clockwise circles with right hand while left hand moves counter-clockwise.

B23. Standing Heel Raises

Description

- Stand, holding onto a sturdy chair or wall, if needed.
- Rise up onto the toes as high as possible.
- Pause and slowly lower to starting position.

Advanced Variation

- Perform exercise without holding onto chair or wall.



B24. Sumos

Description

- Stand with legs slightly apart and arms at sides.
- With left foot, take large step to the left.
- Squat into a sumo (bent-knee) position.
- Push up so weight is on left foot.
- Stand upright with body weight on left foot, raise right foot out to side.
- Take large step onto right foot while keeping torso upright.
- Repeat while stepping off with right foot.

Advanced Variation

- Progress to a lower sumo with a wide step.

B25. Wall Push Ups

Description

- Stand two feet from a wall, facing wall.
- Place hands on wall at shoulder height.
- Stabilize torso, and slowly lean forward toward wall, bending arms.
- Press against wall, returning to standing position.
- Repeat.

Variation

- Repeat exercise with weight on one foot.



B26. Stork

Description

- Shift weight to one foot while looking ahead at some immovable object.
- Lift other knee, level with floor.
- Lift arms to shoulder level.

Variation

- Bring arms forward, and hold parallel to floor.



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Strength Exercises

Building muscle at any age boosts muscle strength, improves balance and decreases the potential for falling and susceptibility to fracture. Strength training translates into maintaining vitality, lifting a grandchild for a hug, carrying 10 lb. grocery bags, or getting out of a chair.

Exercises offered in this section use resistance bands to help build strength.

Exercise Menu

Upper Body

- S1. Biceps Curl
- S2. Back of Arm Press-Back
- S3. Lateral Raise
- S4. Windshield Wiper
- S5. Seated Upright Row
- S6. Overhead Pull Down
- S7. Chest Press

Lower Body

- S8. Partial Squats
- S9. Side Leg Lift
- S10. Hamstring Curl
- S11. Seated Calf Press
- S12. Knee Lift

General Guidelines for Using Resistance Bands

- Always warm up 3-5 minutes before doing strength exercises. A warm-up can include walking in place, lifting knees, and swinging arms.
- Follow warm-up with light stretches.
- Perform each exercise with a full range of motion.
- Perform exercises with slow, controlled movements and good posture.
- Discontinue any exercise that causes pain or discomfort, or lighten resistance.
- Perform exercises 2-3 times per week. Allow one day of rest between exercise sessions.
- Start with enough resistance that 8-15 repetitions can be performed before muscles fatigue. The last repetition should feel somewhat hard.
- Gradually increase resistance when it is easy to complete 15 repetitions.
- Be sure to maintain a regular pattern of inhalation and exhale during the exertion phase and inhale while returning to starting position. Breath NEVER should be held during exercises.

Fit Note:

- 1. Resistance bands come in different levels. To decide the proper color-coded resistance band, remember that the exercise should be difficult, but attainable, during the eighth repetition. If it is easy throughout repetitions, the participant is ready for a stronger resistance band. If exercise is difficult at the fourth repetition, the participant needs to work with a lighter level.*
- 2. Check resistance bands for nicks, small tears or punctures that may cause the band to break. Store bands at room temperature and away from direct sunlight.*
- 3. Maintain a neutral wrist in all activities, using resistance bands to avoid injury.*



- 4. Students who may have difficulty in grasping the band may wrap it around the palm of their hand.*

S1. Biceps Curl

Description

- Stand (or sit toward front of chair), with middle of band anchored under feet. (If the band is too short, use only one foot to anchor it.)
- Grasp ends of band, palms forward, elbows touching waist.
- Seated upright, raise hands toward shoulders without tilting the back or moving elbows.



S2. Back of Arm Press-Back

Description

- Standing with feet together and using a chair for balance, anchor end of band under one foot.
- Step opposite foot back.
- Hold other end of the band in fist with palm down.
- Press palm straight back.
- Release slowly to starting position.
- Repeat on other side.

S3. Lateral Raise

Description

- Stand on one end of band.
- Raise one arm out to side with thumb down.
- Move arm 45 degrees forward.
- Slowly lower arm, then reverse steps.
- Repeat, using other arm.



S4. Windshield Wiper

Description

- Grasp band in middle and hold at chest.
- Hold opposite end of band in other hand with elbow hugging the side of body, and arm across stomach.
- Rotate arm out to side and slowly return.
- Repeat, using other arm.

S5. Seated Upright Row

Description

- Sit toward front of chair, legs extended and heels resting on floor.
- Holding one end of band in each hand, wrap band around bottom of feet.
- Seated upright, and with wrists held in a neutral (straight) position, draw elbows back, letting them flare out to side, until hands reach ribs and shoulder blades squeeze together.
- Keep back straight and shoulders down.
- Return arms to starting position and repeat.

Precaution: Not recommended for participants susceptible to shoulder injury.



S6. Overhead Pull Down

Description

- Stand with the feet apart or sit in a chair.
- Grasp both ends of band.
- Stretch arms up in front of body.
- Slowly lower arms to chest level, moving apart and to sides.
- Avoid arching back and locking elbows.
- Bring hands back together in front of body and repeat.



S7. Chest Press

Description

- Wrap band around middle of back.
- Grasp ends of band next to armpits.
- Press arms straight out, keeping shoulders down.
- Avoid locking elbows as the arms are extended.
- Bring hands back to arm pits and repeat.



S8. Partial Squats

Description

- Stand with balls of feet in middle of band, while holding ends of band.
- Squat as if lowering into a chair.
- Avoid arching or rounding the back or letting knees come forward.
- Contract buttock while straighten up.



S9. Side Leg Lift

Description

- Tie ends of band together and wrap around ankles.
- If seated, lift leg 6-8 inches out to side.
- If standing, side step the outside leg 6-8 inches.
- Repeat on other side.



S10. Hamstring Curl

Description

- Tie one end of band around middle of foot, or wrap folded band around leg at the ankle.
- Holding onto the back of a chair, stand on other end of the band about 7-10 inches in front of tied foot.
- Raise tied foot behind torso as high as possible by bending knee.

S11. Seated Calf Press

Description

- Sit in a chair with one foot flat on floor and opposite leg parallel to floor.
- Wrap band around ball of foot of extended leg.
- Keeping extended leg straight and pressing against band, point toe toward floor.
- Flex foot back as if planning to rest toes on shin.
- Repeat on both sides.



S12. Knee Lift

Description

- Holding onto the back of a chair or wall, step on both ends of band with one foot.
- Wrap band around opposite foot.
- Raise knee toward chest while the back remains straight.
- Return to starting position.
- Repeat on other side.



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Chapter 7

Lesson Plans

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30 Minute Lesson Plan

Equipment Needed

- Chairs for those who need them during warm-up, flexibility, locomotor, and balance phases
- Chairs for everyone will be needed during balance and resistance phases
- Music and boom box
- Exercise bands

[illegible]

Time Frame	Formation	Phase and Exercises
	With chair	7. Posture Pull Downs 8. Elevator Going Up and Down 9. Tailor Raise 10. Trombone 11. Standing Heel Raises 12. Stork
10 minutes	With or in a chair	III. Resistance Phase 1. Knee Lift 2. Hamstring Curl 3. Side Leg Lift 4. Chest Press 5. Lateral Raise 6. Biceps Curl 7. Back of Arm Press-Back 8. Windshield Wiper 9. Seated Upright Row 10. Seated Calf Press
5 minutes	With the wall or chair if needed	IV. Cool Down and Flexibility 1. Standing Hamstring Stretch 2. Standing Quad Stretch 3. Standing Calf Stretch 4. Triceps Stretch 5. Penny Squeeze 6. Chin Tuck 7. Wrist Flexion 8. Wrist Extension Close with Deep Breathing

45 Minute Lesson Plan

Equipment Needed

- Chairs for those who need them during warm-up, flexibility, locomotor, and balance phases
- Chairs for everyone will be needed during balance and resistance phases
- Music and boom box
- Exercise bands

Time Frame	Formation	Phase and Exercises
10 minutes	Moving around the room	I. Warm-up and Flexibility <ol style="list-style-type: none"> 1. Walk around room 2. Walk heel-ball-toe forward 3. Walk on Tip Toes 4. Walk on heels 5. Walk forward, turning head side to side diagonally up and down 6. Walk and tilt head with chin toward chest; nod “yes” 7. Nod “no” slowly and carefully (standing in place, feet shoulder width apart) 8. Shoulder rolls, elbow circles 9. Posture Pull Downs 10. (Widen stance) 11. Side lunges, arms extended (Variations: Pretend you’re driving a large truck) 12. Gentle hip circles 13. Calf Stretch with Hamstring Stretch 14. Hip and back extension 15. Toe Taps
10 minutes	In lines With the wall or a chair if needed	II. Locomotor & Balance <ol style="list-style-type: none"> 1. One-leg stand 2. Hip circles 3. Rock and Roll 4. 30 second Chair Stands 5. Romberg Drill <p>Fit Note: Focus on alignment, feet pressing into the floor. Try different arm positions. Experiment with eyes open and closed. Use cue words like “feeling the floor” and “growing roots” with the feet.</p>

Time Frame	Formation	Phase and Exercises
15 minutes	With a chair	III. Resistance Phase About using resistance bands: Wrap ends of band around hands to avoid undue tension in grip. <ol style="list-style-type: none"> 1. Triceps Curl 2. Overhead Pull Down 3. Chest Press 4. One-Arm Lateral Raise 5. Seated Calf Press 6. Hamstring Curl 7. Knee Lift 8. Standing Heel Raises
10 minutes	With the wall or a chair if needed	IV. Cool Down and Flexibility <ol style="list-style-type: none"> 1. Shoulder rolls forward and backward 2. Palms together over head 3. Give yourself a hug 4. Gentle figure eights with arms 5. Foot circles from the ankle 6. Calf Stretch 7. Hip and back extension 8. Torso turn 9. Neck sequence 10. Big breath

60 Minute Lesson Plan

Equipment Needed

- Chairs for those who need them during warm-up, flexibility, locomotor, and balance phases
- Chairs for everyone will be needed during balance and resistance phases
- Music and boom box
- Exercise bands

Time Frame	Formation	Phase and Exercises
0 - 10 Minutes	<p>Standing in lines</p> <p>Circle around room</p>	I. Warm-up and Flexibility <ol style="list-style-type: none"> 1. Side Reach <ol style="list-style-type: none"> a. Talk to your neighbor 2. Circle Ankles 3. Walk in Place - small steps <ol style="list-style-type: none"> a. Head turn neck stretch b. Circle shoulders forward and backward c. Reach arms to the side d. Reach arms forward and back by the side e. Change of Focus while walking <ul style="list-style-type: none"> Look up to the right Look down to the left Up to the left Down to the right Etc. 4. Arm across stretch 5. Walk around room in a circle <ol style="list-style-type: none"> a. While walking Knee Lifts to the front b. Heel Taps c. Lifts to the Rear
11 - 40 minutes	<p>Circle around the room</p> <p>In lines</p> <p>In lines</p> <p>In lines</p>	II. Locomotor & Balance <ol style="list-style-type: none"> 1. Circle Walking - add arms <ol style="list-style-type: none"> a. Forward Presses b. Side Pushes c. Rope Climbs d. Press Downs 2. March - add arms from the above 3. Fast and Slow Paced Walking 4. Forward and Backward Walk 5. Diagonal Walk

Time Frame	Formation	Phase and Exercises
	<p>All over the room</p> <p>In lines</p> <p>In a chair With a chair or against a wall Wall</p>	<p>6. Box Walk 7. Motor Cars</p> <p>8. Toe Walks 9. Heel Walks 10. Tandem Walk 11. Grapevines 12. Posture Pull Down 13. Faux Jumps 14. Chorus Line 15. Ice Cream Cone 16. Real Swinger 17. Shake It up and Stretch It Out 18. Elevator Going Up and Down 19. Trombone 20. Standing Heel Raises 21. Stork 22. Wall Push-ups</p>
41 - 55 minutes	With a chair	<p>III. Resistance Phase</p> <p>1. Knee Lift 2. Hamstring Curl 3. Side Leg Lift 4. Chest Press 5. Seated Row 6. Biceps Curl 7. Back of Arm Press-Back</p>
55 - 60 minutes	With the wall or chair if needed	<p>IV. Cool Down and Flexibility</p> <p>1. Standing Hamstring Stretch 2. Standing Quad Stretch 3. Standing Calf Stretch 4. Triceps Stretch 5. Penny Squeeze 6. Chin Tuck 7. Wrist Flexion 8. Wrist Extension</p> <p>Close with Deep Breathing</p>

Chapter 8

Forms and Handouts

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PAR-Q & YOU
(A Questionnaire for People Aged 15 to 69)
Page 1 of 2

Regular physical activity is fun and healthy, and increasingly more people are starting to become more active every day. Being more active is very safe for most people. However, some people should check with their doctor before they start becoming much more physically active.

If you are planning to become much more physically active than you now are, start by answering the seven questions in the box below. If you are between the ages of 15 and 69, the PAR-Q will tell you if you should check with your doctor before you start. If you are over 69 years of age, and you are not used to being very active, check with your doctor.

Common sense is your best guide when you answer these questions. Please read the questions carefully and answer each one honestly: check YES or NO.

		Yes	No
1	Has your doctor ever said that you have a heart condition and you should only do physical activity recommended by a doctor?		
2	Do you feel pain in your chest when you do physical activity?		
3	In the past month, have you had chest pain when you were not doing physical activity?		
4	Do you lose your balance because of dizziness or do you ever lose consciousness?		
5	Do you have a bone or joint problem that could be made worse by a change in your physical activity?		
6	Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?		
7	Do you know of any reason why you should not do physical activity?		

If you answered YES to one or more questions, talk with your doctor before you start becoming much more physically active or BEFORE you have a fitness appraisal. You may be able to do any activity you want - as long as you start slowly and build up gradually. Or, you may need to restrict your activities to those that are safe for you. Talk with your doctor about the kinds of activities you wish to participate in and follow his/her advice. Find out which community programs are safe and helpful for you.

If you answered NO to all questions, you can be reasonably sure that you can start becoming more physically active - begin slowly and build up gradually. This is the safest and easiest way to go. You can take part in a fitness appraisal - this is an excellent way to determine your basic fitness so that you can plan the best way for you to live actively. It is also highly recommended that you have your blood pressure evaluated. If your reading is over 144/94, talk with your doctor before you start becoming much more physically active.

PAR-Q & YOU
(A Questionnaire for People Aged 15 to 69)
Page 2 of 2

DELAY BECOMING MUCH MORE ACTIVE:

- If you are not feeling well because of a temporary illness such as a cold or a fever - wait until you feel better; or
- If you are or may be pregnant - talk to your doctor before you start becoming much more active.

Please note: If your health changes so that you then answer YES to any of the above questions, tell your fitness or health professional. Ask whether you should change your physical activity plan.

**I have read, understood and completed this questionnaire.
Any questions I had were answered to my full satisfaction.**

NAME _____

SIGNATURE _____

DATE _____

WITNESS _____

NOTE: This physical activity clearance is valid for a maximum of 12 months from the date it is completed and becomes invalid if your condition changes so that you would answer YES to any of the seven questions.

This form, when signed by the class participant, has been approved as a liability waiver for Fit and Fall Proof class participants by the Idaho Department of Health and Welfare.

Informed Use of the PAR-Q: The Canadian Society for Exercise Physiology, Health Canada, and their agents assume no liability for persons who undertake physical activity, and if in doubt after completing this questionnaire, consult your doctor prior to physical activity.

You are encouraged to copy the PAR-Q but only if you use the entire form.

STATEMENT OF MEDICAL CLEARANCE FOR EXERCISE

Participant's Name _____

Address _____

Date of Birth _____

Diagnosis _____

Physician's Name _____

Address _____

Telephone Number _____

☐ YES, My patient, _____, has no current unstable medical problems that are a contraindication to participating in an exercise or resistance-training program. I approve of and support his or her participation in this progressive strength, balance, and flexibility-training exercise program.

Comments:

☐ NO, My patient, _____, is not eligible to participate in the exercise program due to his or her current medical status.

Comments:

Please indicate any special recommendations or specific comments:

Physician's Signature _____

Date _____

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3-METER TIMED UP AND GO TEST INSTRUCTIONS

DESCRIPTION

Measures dynamic balance, gait speed, and functional capacity for household and community mobility.

ESTIMATED TIME OF TEST

5 minutes

ADVANTAGES

- Quick and simple.
- Measures change over time.
- Can be used as screening or descriptive tool.

INSTRUCTIONS FOR TEST SET UP

- Set the chair that will be used in the test up against a wall. This will prevent it from sliding or tipping backwards.
- Using measuring string found in the 3-Meter Timed Up and Go Test packet, measure straight out from the forward edge of the front leg of the chair.
- Place a cone at the far end of the measuring string. This is the turn-around point.

INSTRUCTIONS FOR TIMED UP & GO

1. Client sits in a chair (starts with back against the chair, arms resting comfortably at sides; wears regular footwear; uses customary walking aid; no physical assistance is given).
2. Client is instructed that on the word “go” he is to get up and walk at a comfortable and safe pace to the cone (3 meters away), turn, return to chair, and sit down again.
3. Client is given a practice trial to become familiar with the test.

SCORING

<10 seconds

- Clients are freely mobile.
- Low fall risk; encourage regular exercise of community-based exercise program.

<20 seconds

- Clients are independent with basic transfers.
- Most go outside alone and climb stairs.
- Many are independent with tub and shower transfers.
- *Moderate fall risk; PT referral MAY be appropriate.*
- *May benefit from Stumble Stoppers or supervised exercise program.*

20-29 seconds

- The “gray zone”; functional abilities vary.
- High fall risk; physician assessment recommended.
- *May not be appropriate for community program prior to PT intervention.*

>30 seconds

- Many are dependent with chair and toilet transfers.
- Most are dependent with tub and shower transfers.
- Most cannot go outside alone.
- Few, if any, can climb stairs independently.
- *Very high fall risk; physician assessment recommended.*
- *Clinic or home physical therapy referral MAY be appropriate.*
- *Not appropriate for community programs.*

Adapted from: Podsiadlo D, Richardson S. The Timed “Up and Go”: A Test of Basic Functional Mobility for Frail Elderly Persons. *Journal of The American Geriatric Society*. 1991;39:142-148.

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Each Year In Idaho, Ambulances Respond To 6,000 Calls For Falls

AVOID BEING A STATISTIC.



An Active Lifestyle Can Reduce Your Risk For Falling.

BE FIT AND FALL PROOF!

Join a Fit and Fall Proof class!

Place:

Time:

Days:



**1 IN 3 PEOPLE OVER
THE AGE OF 65 FALLS
EACH YEAR**

**Are you afraid of
falling?**

**AN ACTIVE LIFESTYLE
CAN REDUCE YOUR
RISK.**

**Join a
Fit and Fall Proof
Class!**



Place:

Time:

Days:

MOST HIP FRACTURES HAPPENED BECAUSE SOMEONE FELL.

1 of 4 people with a hip fracture remains institutionalized for a year or more.



An Active Lifestyle Can
Reduce Your Risk Of Falling.

Join a *Fit and Fall Proof* class!

Place:

Time:

Days:

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STUDENT HANDOUTS

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Home Fall Prevention Checklist

Stairways, Hallways, Pathways

- ☐ Stairs, halls, and pathways are clutter free.
- ☐ Stairs, halls, and pathways are well lit.
- ☐ There are light switches at the top and bottom of stairs.
- ☐ Handrails are tightly fastened and run the length along both sides of all stairs.
- ☐ Steps are level, same height and size, and not broken.
- ☐ Step edges are painted with a contrasting color so that you can see them better.

Living Rooms

- ☐ Electrical cords and telephone wires are placed away from walking paths.
- ☐ Rugs are well secured to floor.
- ☐ Furniture (especially low coffee tables) and other objects are arranged so they allow a clear walking path.

Kitchen

- ☐ Items you use often are on the lower shelves of your cabinets.
- ☐ Stepstool is steady and has a bar to hold. Never use a chair as a stepstool.
- ☐ Remove throw rugs from kitchen floor.

Bedrooms

- ☐ Carpets and area rugs are firmly attached to floor.
- ☐ Telephone is within easy reach near bed.
- ☐ Have night lights so you can see where you walk.
- ☐ Lamp or light switch is within reach of bed.

Bathroom

- ☐ There are grab bars in and out of tubs, showers, and near toilets.
- ☐ There are non-skid mats or abrasive strips in tub or shower.
- ☐ There is a slip-resistant rug adjacent to tub or shower for safe exit.
- ☐ There is a night light to see where you walk.

Other Tips

- ☐ Post emergency numbers in large print near telephone.
- ☐ Get up slowly after you sit or lie down.
- ☐ Wear sturdy shoes with thin, non-slip soles. Avoid slippers and running shoes with thick soles.
- ☐ Have vision checked at least once a year.
- ☐ Talk to doctor or pharmacist about side effects of drugs you take.
- ☐ Exercise regularly. It makes you stronger and improves balance and coordination.

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About Your Feet

Did you know?

- Each foot has 26 bones, 33 joints, 36 muscles and more than one mile of blood vessels and nerves.

Get the Right Fit

Have your feet measured every time you shop for shoes. Shop in the afternoon or evening, since feet swell by as much as a full size over the course of a day. Stand up to be sure your weight is distributed evenly on the foot being measured. If your feet are different sizes, choose shoes in the larger size. Walk around in the shoes, preferably on both hard and soft surfaces. Select rubber heels and soles, which absorb shock better than leather or synthetics. Consider buying a larger size to accommodate insoles for extra cushioning, and avoid heels higher than one inch.

Feet and Balance

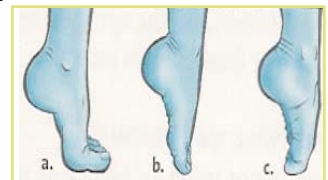
Foot ailments can affect walking balance. Loss of elastin reduces flexibility of many joints of the foot. Fat pads that protect soles, heels, and ball of the foot disappear. Calluses may form on weight-bearing points of the foot, causing pain and changing alignment and gait. Dehydration or general thinning of the skin may cause bruising and wounds that are slow to heal. Toe nails become thicker, brittle, and more difficult to care for.

Exercise Your Feet

These easy exercises can help strengthen and stretch foot muscles. Do them seated or standing, first one foot and then the other.

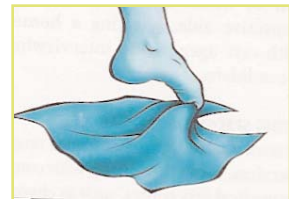
1. Heel raise, toe point, toe curl hold each of these positions for five seconds:

- a. Lift heel as high as possible, keeping toes and ball of foot on floor.
- b. Point foot down as far as possible, and leave only big toe touching floor.
- c. Lift whole foot off ground, curl toes, point foot straight down, and place toe “knuckles” on floor, exerting enough pressure to stretch toes and top of foot. Repeat 10 times.



2. Towel Lifts

- a. Raise a small towel off floor, using only toes. Repeat five times.



3. Pick-Ups

- a. Pick up a marble or squeeze a soft spongy ball with bottom of foot.



4. Heel Stretches

- a. Stand 18 inches away from wall, with palms on wall at shoulder height and width. Extend left leg back two feet, and bend right knee. Keep left leg straight, pressing left heel into floor. Toes should point forward. Hold 15 seconds, then switch sides. Do twice daily, 10 times for each leg. Helps relieve heel, ankle, and calf pain and tightness. Also good for preventing foot pain.



5. Tap toes 50 times daily. Pull toes up toward shin between each tap.

Give Your Feet a Hand

As an inexpensive alternative to mechanical foot massagers, try “tootsie rolls”: Move your feet back and forth over a rolling pin or golf ball for a few minutes. Or try these self-massage techniques. Repeat at least three times on each foot.

- Using thumb, heel of hand, or knuckles, stroke bottom of opposite foot in a series of straight lines from heel to toe, starting with inner arch and progressing to outer edge, then back again.
- Place thumbs in the space between the bases of the big and first toes of either foot. Move thumbs straight back across top of your foot to just above your ankle. Repeat for the other three toe spaces.
- Press bottom of foot with opposite thumb, using a small circular motion. Repeat until you’ve covered every part of the sole.
- “Draw” diagonal lines across bottom of foot with tips of index and middle fingers of opposite hand. Move from heel to ball of foot and back again.

Choosing a Walking Shoe

As gentle as walking is, your feet and legs will absorb a blow equivalent to twice your body weight with every step. Careful attention to shoe selection is important to maximize comfort and minimize potential for injury.

The Right Fit

Part of finding the right athletic shoe is learning your foot type. Most fall into three main categories: normal, flatfoot, or high arches. This wet test will tell you which type you have and help you choose the right shoe. To do the test, wet your feet, then stand on any surface that will leave a mark. Look at the imprint.

- A. **NORMAL FOOT:** Your toe bed and heel are connected by a wide band, and there's a space where your arch curves off the sole. Best shoes: Those made for cushioning and stability, with moderate control.
- B. **FLATFOOT:** Your entire sole, including the arch, leaves an imprint. Because you have a low, flexible arch, your foot rolls inward too much, which can put the knee and hip out of alignment. Best shoes: Motion-control.
- C. **HIGH ARCH:** The imprint shows your forefoot and heel are connected by a very thin band. High-arched feet do not pronate (turn inward during motion) well and aren't as efficient at absorbing shock. Best shoes: Cushioned with flexibility.

When Selecting a Shoe

- Make sure your shoes are $\frac{1}{2}$ inch longer than your longest toe, so toes are not crowded. The toe box should be roomy, but not so spacious that feet slide or blisters form.
- Fit shoes snugly in the heel.
- Choose a shoe with uppers made of material that breathes easily.
- Shop for shoes later in the day after walking. Exercise makes your feet swell slightly and changes the fit.
- Look at your old shoes to see where the "wear" is: Ball of the foot? Side? Heel?

Old Shoes Tell a Lot

- If your shoes are badly worn on the outside edge of the heel, you need good heel cushioning because your heel takes a lot of pounding.
- If you see wear on the lateral side of the sole of your shoe, or if the portion of your shoe that cradles your heel is rolling, you need a shoe with more stability.
- If you notice wear only under the forefoot, you're striking with the ball of your feet and need a lot of cushioning in the forefoot.
- If your foot buds over the side of your shoe, you need a wider shoe.
- If you have toe marks inside your shoe or your toenails become thick, you need more room in the toe area.

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